additional advantage of being used in all EVAR endoprosthesis procedures in order to perform a cast around the endograft assembly **600**, filling the aneurysm sac and avoiding several complications such as Endoleak I and II and structural alterations of the endograft assembly **600** produced by the stress stretching pressure wall effect.

Endograft assemblies **600** of the present disclosure may be delivered and/or positioned within a vessel lumen using any number of medical tools known in the art to deliver stents and/or endografts.

Although the above exemplary embodiments of the present disclosure are described in connection with treatment of aneurysms, particularly an abdominal aortic aneurysm, the disclosure of the present application is not limited to its use in correcting aneurysms. Many other uses are possible within the scope of the present disclosure. For example, the combination of a metallic material and a corresponding magnetic device may be used for the correction of the structure or architecture of organs, such as the heart or along other parts of the aorta or other vessel.

While various embodiments of devices and methods for treating aneurysms have been described in considerable detail herein, the embodiments are merely offered by way of non-limiting examples of the disclosure described herein. It will therefore be understood that various changes and modifications may be made, and equivalents may be substituted for elements thereof, without departing from the scope of the disclosure. Indeed, this disclosure is not intended to be exhaustive or to limit the scope of the disclosure.

Further, in describing representative embodiments, the disclosure may have presented a method and/or process as a particular sequence of steps. However, to the extent that the method or process does not rely on the particular order of steps set forth herein, the method or process should not be limited to the particular sequence of steps described. Other sequences of steps may be possible. Therefore, the particular order of the steps disclosed herein should not be construed as limitations of the present disclosure. In addition, disclosure directed to a method and/or process should not be limited to the performance of their steps in the order written. Such sequences may be varied and still remain within the scope of the present disclosure.

The invention claimed is:

1. An endograft assembly, comprising:

an endograft having an inner wall, an outer wall, and a graft structure positioned between the inner wall and the outer wall, the inner wall of the endograft defining an endograft lumen sized and shaped to permit fluid to flow therethrough; and

a sponge sheath having a distal end and a proximal end, the sponge sheath positioned around the outer wall of the endograft and configured to permit flow of blood therethrough.

2. The endograft assembly of claim **1**, wherein the inner wall of the endograft is impermeable to fluids, and wherein the outer wall of the endograft is permeable to fluids.

3. The endograft assembly of claim **1**, wherein the sponge sheath defines one or more sponge channels therein, said sponge channels configured to permit fluid flow therethrough.

4. The endograft assembly of claim **3**, further comprising a reservoir bag coupled to the sponge sheath at or near the proximal end of the sponge sheath, said reservoir bag capable of receiving fluid from the sponge sheath and the one or more sponge channels.

5. The endograft assembly of claim **4**, further comprising a catheter having a distal catheter end, a proximal catheter end, and a lumen therethrough, wherein the distal catheter end of the catheter is coupled to the reservoir bag.

6. The endograft assembly of claim **5**, further comprising a suction/injection source coupled to the catheter at or near the proximal catheter end, the suction/injection source capable of providing suction within the lumen of the catheter and further capable of injecting a substance into the lumen of the catheter.

7. The endograft assembly of claim **5**, further comprising a suction/injection source coupled to the catheter at or near the proximal catheter end, the suction/injection source capable of providing suction within the lumen of the catheter to facilitate removal of blood present within an aneurysm sac when the endograft assembly is positioned within a vessel at or near the site of a vessel aneurysm and when the catheter is coupled to the reservoir bag.

8. The endograft assembly of claim **5**, further comprising a suction/injection source coupled to the catheter at or near the proximal catheter end, the suction/injection source capable of injecting a substance into the lumen of the catheter and into an aneurysm sac when the endograft assembly is positioned within a vessel at or near the site of a vessel aneurysm and when the catheter is coupled to the reservoir bag.

9. The endograft assembly of claim **8**, wherein the substance is capable of forming a cast within the aneurysm sac when it is injected to the aneurysm sac, said cast providing structural reinforcement to the vessel aneurysm.

10. The endograft assembly of claim **5**, wherein the catheter further comprises a catheter tip at the distal catheter end, the catheter tip configured to fit within a lumen of the reservoir bag.

11. The endograft assembly of claim **4**, wherein the reservoir bag comprises a reservoir bag threaded portion corresponding to a catheter threaded portion located at a distal catheter end of a catheter, permitting the catheter to be rotatably coupled to the reservoir bag.

12. The endograft assembly of claim **4**, wherein the reservoir bag comprises one or more unidirectional valves configured to permit fluid to flow out of the reservoir bag when a catheter is coupled thereto, and wherein the one or more unidirectional valves prevents fluid from flowing out of the reservoir bag when a catheter is not coupled thereto.

13. The endograft assembly of claim **1**, wherein the endograft comprises a configuration chosen from a straight configuration and a curved configuration.

14. The endograft assembly of claim **1**, wherein the endograft assembly is capable of a first, collapsed configuration, and wherein the endograft assembly is capable of a second, expanded configuration.

15. The endograft assembly of claim **1**, wherein the sponge sheath comprises one or more materials chosen from cellulose fiber, wood fiber, foamed plastic polymer, polyurethane, silastic, rubber, polytetrafluoroethylene, synthetic sponge, natural sponge, low-density polyether, polyvinyl alcohol, and polyester.

16. An endograft assembly, comprising:

an endograft having an inner wall and an outer wall, and a graft structure positioned between the inner wall and the outer wall, the inner wall of the endograft defining an endograft lumen sized and shaped to permit fluid to flow therethrough;

a sponge sheath having a distal end and a proximal end, the sponge sheath coupled to the outer wall of the endograft and configured to permit flow of blood therethrough, the sponge sheath defining one or more sponge channels configured to permit fluid flow therethrough;

a reservoir bag coupled to the sponge sheath at or near the proximal end of the sponge sheath, said reservoir bag